PETROLEUM REVIEW

Editor

CAROL READER

VOLUME FORTY-SEVEN

1993

THE INSTITUTE OF PETROLEUM
61 New Cavendish Street
London W1M 8AR

INDEX 1993

Authors

Naji, Abi-Aad
- Expansion of Syrian crude production....Jun
- Latest oil developments in Sudan....Jun
- Surge in exploration activity in Tunisia....Sep

Algar, P
- Thailand: Economic expansion highlights potential energy problems....Jan

Baker, Dr J M
- Fate and Effects of Marine Pollution in UK Waters – with a perspective on IP-sponsored research....Aug

Barraclough, C
- Iranian gas to come to the aid of Armenia....Sep
- Trials and tribulations for Iranian gas....Oct

Bennett, R
- Recovery of hydrocarbon vapours from ship loading of crude oil....Mar

Buckman, D
- Southern Mediterranean activity is fanning out....Feb
- Mid East gas could ease Asian/Far East energy problems....Jul
- Gas – key to curbing Pakistani energy shortage....Jul
- West African prospects still look good....Nov

Cardy, S
- Then and now – 80 years at the IP....Jul
- Government stands firm on Budget changes....Aug
- Coalbed methane – fuel of the future?....Aug
- Advanced diving....Sep
- North Sea vision....Sep
- Angling for oil at Wytch Farm....Oct
- 'Nigeria at a crossroads'....Oct
- Putting the environment first....Nov

Casper, S
- An airline perspective on fuel supply arrangements....Jan

Cameron, Dr P
- Investing in Russian oil and gas: the legal factor....Mar

Collomosse, P
- The Euro-card war is coming....Nov

Cranfield, J
- Yugoslavia break-up reverses 40 years of energy development....May
- Ecuador leaving OPEC frees up major expansion plans....May
- Mid East gas could ease Asian/Far East energy problems....Jul
- Indigenous energy finally makes its mark in Jordan....Nov
- Finnish energy switch gathers speed....Dec
- Independence of Baltic states forces major energy rethink....Dec

Dando, P R
- The importance of hydrocarbon input as an energy source for benthic production near natural gas and oil seeps....Mar

DeCrane Jr, A C
- Call for responsive international environmental policies....Mar

Emery, J A
- Concrete block pavements for service stations....Feb

Flin, Dr R & Slaven, G
- Managing offshore installations....Feb

Fuchs, Dr M
- The European lubricants market and the role of the independent lubricant manufacturers....Jan

Farmer, Dr T H
- The environmental classification of complex hydrocarbon mixtures....Apr

Fuller, J A
- Refinery process operations national/Scottish vocational qualifications....Feb

Gaisford, R
- Achieving a low cost culture in the North Sea....Apr

Grötzbach, J
- From storage to aircraft – German fuel handling system....Nov

Gurney, J
- President Clinton's Energy Tax....Mar
- US contingency plans for oil spills....Apr
- Expansion in US regulation of gasoline emissions....May
- Bright prospects for Canadian gas....Dec

Hardy, I N M
- Aircraft refuelling: extended apron services....Jan

Harris, R
- Survival training – based on fact or fiction?....Sep

Harvey, C
- The role of logistics within the downstream sector....Jul

Haycock, R F
- Classification of engine lubricants....Feb

Hill, E C
- Development in microbial control in metalworking fluids....Dec

Hooks, R W
- Advances in the measurement of the vapour pressure of petroleum products and crude oils....Sep

Hyslop, M P
- Improved profitability via oil product inventory control....Dec

Johns, C
- 'Western oil and gas activity in the FSU has already taken off'....Dec

Jones, N H
- Major terminal up-grade....Apr

Kellaway, R
- Economic benefits of contracting out storage....Aug

Kelly, F
- Coriolis mass metering on LPG road vehicles....Dec

Kielmas, M
- Mexican oil: poverty issue will force a change....Jan
- Taxes cloud Colombian oil industry future....Oct

Latta, T
- Russian oil update....Aug

Martin, B T
- VLCC replacement: the question is 'when' not 'whether'....Apr

Mayhew, G
- A substantial increase in gasolines with clean-up additives....Jan
- North Sea tax changes require strategy reviews....Jun
- Asia's growth in oil consumption poses problems....Jul
- Shell is going well in China....Jul
- Isomerisation comes to Coryton....Nov

McFarlane, G
- The approach of excise law reform....Nov

INDEX 1993

McLeod, R
- Will British coal put an end to gas?.....Mar
- Recession's impact on car market continues.....RMS Supplement Mar 93
- Dealing with the dealer.....RMS Supplement Mar 93
- Coal's future in the balance as gas gets the go-ahead.....May
- Slow progress for power from renewables.....May

Meads, E K
- Software for refinery systems integration.....ITS Supplement May 93

Miere, G O
- Better to be safe than sorry.....RMS Supplement Mar 93

Moore, B & Hamilton, T
- Shallow gas hazard – the HSE perspective.....Sep

Morley, P
- Towards 2000 – the national targets.....Feb

Mulder, H
- Europe needs a bold initiative: EPIS.....Jun
- Energy: the risk of underinvestment.....Dec

Naylor, M
- UK 1993 budget commentary: some will win and some will lose.....Apr

Nicandros, C S
- 'I am encouraged by our experience in Russia'.....Oct

Noble, P
- Profitability threatened on all sides.....RMS Supplement Mar 93

Olson, M
- An integrated approach for reservoir management.....ITS Supplement May 93

Packer, J
- Role of coastal shipping in the primary distribution of petroleum product in the United Kingdom.....Sep

Patton, P E
- High conversion rates for ether-based oxygenate process.....May

Pirret, D
- Restoring the balance.....Jun

Plant, J
- What's new in IT project management upstream.....ITS Supplement May 93

Potter, N
- Beware – changes ahead in transport of dangerous goods.....Nov

Reader, C
- A wealth of talent but...Feb
- Launch of floating storage.....Apr
- No change yet to UK budget provisions.....May
- New outlook on Europe from Mobil House.....May
- Proteus signs up Transfleet tankers.....Jul
- MMC recommends break-up of British Gas.....Sep
- The United Kingdom's flagship oil and gas show.....Oct

Reid, T
- Financial incentives for the petroleum industry.....Oct

Roberts, J
- Yemen – the next big player?.....Mar
- Which way forward for a revitalised Kuwait?.....May
- Pipeline issues in Central Asia.....Aug
- 'Algeria needs investment now – particularly in the energy field'.....Oct
- Libya awaits its fate.....Nov
- Gulf gas – tomorrow's nest-egg.....Dec

Roos, P V
- Developments in the fuelling requirements of future aircraft types.....Jan

Rossant, J
- Consequences of Azerbaijan's latest military coup.....Aug
- Latest news from Turkmenistan.....Dec

Sangster, A
- Environmental guidelines for petroleum distribution installations.....Jun

Schaafsma, M G
- Well engineering in the 1990s.....Sep

Scholes, W
- New Zealand's Maui B project comes on stream.....Feb
- Cyclone season delays Goodwyn platform.....Mar
- APEA companies seek government tax review.....May
- Indonesia's plans for Natuna Sea gas.....Jul
- Progress in Papua New Guinea.....Jul
- Maui number one in New Zealand.....Jul
- 'Asia Pacific – the most dynamic region in the world'.....Sep
- Malaysia's big pipeline.....Oct
- Gas to goldfields project in Western Australia.....Oct

Sherratt, M
- Recommendations for change in the methodology for Flash Point Testing of Residual Fuels.....Sep

Simon, D
- 1993 oil supply and price scenario.....Jan

Slaughter, A
- The outlook for lubricants supply and demand in key West European markets.....Jun

Slaven, G
- Does information technology improve safety training?.....Oct

Snook, J D
- IP Draft Code of Practice for On-board Truck Computers.....Sep

Sunman, Dr G
- Thinking the unthinkable.....Apr

Taylor, R S
- The 'European' service station: myth or reality?.....Jun

Tempest, P
- 'There are grounds for hope that a third major oil shock can be avoided'.....Oct

Thomas, D
- The Braer incident at first hand.....Jun

Todd, S
- French policy on bio-fuels.....May

Watson, N
- The practicalities of insurance in Vietnam.....Jul

Williamson, I
- Economics and management training.....Feb

Whitaker, D
- Olé for Spanish gas.....Jun

Zajdela, M & Buchholz, L
- The European automotive gasoil market.....Sep

INDEX 1993

Subjects

Abu Dhabi
- Abu Dhabi gas expansion ..... May

Aircraft Refuelling
- Aircraft refuelling: extended apron services ..... Jan
- Developments in the fuelling requirements of future aircraft types ..... Jan
- An airline perspective on fuel supply arrangements ..... Jan
- From storage to aircraft – German fuel handling system ..... Nov

Algeria
- 'Algeria needs investment now – particularly in the energy field' ..... Oct

Amerada Hess
- Amerada acquires licence interests ..... Feb
- Hudson gets Annex B approval ..... Feb

Amoco
- Amoco targets $3.2 billion capital spending programme for 1993 ..... Feb
- Power failure hits production ..... May
- CATS on stream ..... Jul
- Amoco wins Western Siberia bid ..... Oct
- Amoco's investment plans for southern North Sea ..... Nov

Annual survey – lead/sulphur content of petroleum products 1992 ..... Jun

Armenia
- Iranian gas to come to the aid of Armenia ..... Sep

Asia
- Asia's growth in oil consumption poses problems ..... Jul
- Mid East gas could ease Asian/Far East energy problems ..... Jul
- Pipeline issues in Central Asia ..... Aug
- 'Asia Pacific – the most dynamic region in the world' ..... Sep

Australia
- Cyclone season delays Goodwyn platform ..... Mar
- APEA companies seek government tax review ..... May
- Gas to goldfields project in Western Australia ..... Oct

Azerbaijan
- Consequences of Azerbaijan's latest military coup ..... Aug

Baltic States
- Independence of Baltic states forces major energy rethink ..... Dec

Black Sea
- Black Sea rig move ..... May
- British lab opens on Black Sea ..... Feb

Book Reviews
- Managing Industrial Emergencies ..... Jan
- Motor Fuels Business in the UK 1991/1992 – Market Shares, Supplies, Profitability ..... Jan
- Oil and Gas in the Former Soviet Union: The Changing Foreign Investment Agenda ..... Aug
- The Russian Oil Industry: Status and Outlook ..... Aug
- The Russian Gas Industry: Status and Outlook ..... Aug
- Oil Markets and Prices – The Brent Market and the Formation of World Oil Prices ..... Oct
- Publications ..... Oct

BP
- Clair development scheme ..... Feb
- Devaluation blights BP recovery ..... Mar
- BP wins Ford energy management contract ..... Mar
- BP confirms major oil find ..... Apr
- Ex-chairman's £1.5 million settlement ..... Apr
- Venezuelan deal ..... Apr
- Crude dewatering ..... May
- BP Energy's new heat and power contracts ..... Sep
- BP to boost North Sea spending ..... Oct
- Heat tracing for BP Kinneil ..... Oct
- BP sells Orimulsion stake ..... Nov
- UK inquiry underway into Kuwait's BP tax deal ..... Nov
- Integration for Theddlethorpe gas terminal ..... Dec
- BP strengthens Alaskan presence ..... Dec
- Fine for safety breach (BP Exploration) ..... Dec

Braer
- The Braer incident at first hand ..... Jun

British-Borneo
- British-Borneo to review exploration

British Gas
- MMC recommends break-up of British Gas ..... Sep

Burmah Castrol
- Burmah Castrol splits top jobs ..... Mar
- Burmah Castrol in lubricants purchase ..... May

Careers
- A wealth of talent but... ..... Feb

Canada
- Canadian government's stake ensures Hibernia project's future ..... Mar
- Bright prospects for Canadian gas ..... Dec

Chevron
- Britannia test 'very encouraging' ..... Feb
- Launch of floating storage ..... Apr
- Chevron and Shell to slash exploration ..... Aug
- Britannia first gas delay ..... Nov

China
- China opens western basin for foreign oil exploration ..... Apr
- Shell is going well in China ..... Jul

Coalbed Methane
- Coalbed methane – fuel of the future? ..... Aug

Colombia
- Taxes cloud Colombian oil industry future ..... Oct

Conference Reports
- Developments in aircraft fuelling ..... Jan
- Occupational standards for the oil industry ..... Mar
- Standards revealed (Upstream standards and the European Single Market) ..... Jun
- 'Asia Pacific – the most dynamic region in the world' ..... Sep
- The United Kingdom's flagship oil and gas show (Offshore Europe '93) ..... Oct

Conoco
- Conoco announces discovery well ..... Apr
- Appraisal success ..... May
- New chief for Conoco UK ..... Oct
- 'I am encouraged by our experience in Russia' ..... Oct
- Britannia first gas delay ..... Nov
- Integration for Theddlethorpe gas terminal ..... Dec

Computers
- Engineering survey computer breakthrough claim ..... Jan
- TOTAL launches local business account package ..... Jan
- Personnel monitoring system ..... Jan
- Rig test control system ..... May
- Software for refinery systems integration ..... ITS Supplement May 93
- What's new in IT project management upstream ..... ITS Supplement May 93
- An integrated approach for reservoir management ..... ITS Supplement May 93
- Refinery movements and storage package ..... ITS Supplement May 93
- North Sea tax tracking system ..... ITS Supplement May 93
- Interface system for hand-held terminal ..... ITS Supplement May 93
- Smart key fuel monitoring ..... ITS Survey Supplement May 93
- Leak tracing system for oil and gas pipelines ..... ITS Supplement May 93
- Norwegian code checks for StruCAD*3D ..... ITS Supplement May 93
- PC based SCADA systems ..... Jul
- IP Draft Code of Practice for On-board Truck Computers ..... Sep
- Solving fading thermals ..... Sep
- Does information technology improve safety training? ..... Oct
- Petroleum desktop ..... Oct
- Upgraded video analyser ..... Oct
- Choosing the right tender ..... Nov
- Common standard for software ..... Dec
- Mapping personnel movements ..... Dec
- Software controls provers ..... Dec

DTI
- DTI move to Aberdeen ..... Apr

Downstream
- League table for downstream sector ..... Oct

INDEX 1993

– Sir John Collins warns of 'acute strain' in downstream sector ..... Oct
– The role of logistics within the downstream sector ..... Jul

Ecuador
– Ecuador leaving OPEC frees up major expansion plans ..... May

Education and Training
– How to find the right training for oil and gas industry professionals ..... Jan
– European advanced training in marine technology 1992-3 ..... Jan
– New flexible degree programme in petroleum law, policy and economics ..... Jan
– Foreign Office supports oil and gas scholarship scheme ..... Jan
– Certification practices in the EC ..... Jan
– Student Prize Awards ..... Jan
– Training course for tanker drivers ..... Feb
– Towards 2000 – the national targets ..... Feb
– Refinery process operations national/Scottish vocational qualifications ..... Feb
– Economics and management training ..... Feb
– Training for emergencies offshore ..... Mar
– Occupational standards for the oil industry ..... Mar
– Advanced lubricant training ..... Mar
– IP Education and Training Committee ..... Jun
– Student prizes ..... Jun
– Boost for industry school links ..... Jun
– The Learning Organisation ..... Jun
– Women in the workforce ..... Jun
– To university without A levels ..... Jun
– Tony Fox Memorial Fund ..... Jun
– Vocational 'A' levels ..... Sep
– 'No more black oil smoke' ..... Sep
– Privatisation of the careers services ..... Sep
– Don't ignore half the workforce ..... Sep
– Guidance for shell boilers ..... Nov
– Lifetime learning for engineers ..... Dec
– Focused Action Learning gives real payback ..... Dec
– Girl wins top engineering prize ..... Dec
– Welcome for NVQs ..... Dec
– New bursaries for 'top flight' engineering students ..... Dec
– New IP careers brochure ..... Dec
– Student wins IP Prize ..... Dec

Elf
– Elf and Fina in service station swap ..... Nov
– Elf goes green with Ecotech coatings ..... Dec

Elf Enterprise
– Exploration top priority for Elf Enterprise ..... Dec

Emissions
– NO_x reductions ..... Jan
– Integrated multiple emissions monitoring system ..... Mar
– Emissions monitoring ..... Apr
– Expansion in US regulation of gasoline emissions ..... May
– Low emission technology for integral engine compressors ..... May
– Catalyst cuts stack emissions ..... Jun
– Advances in the measurement of the vapour pressure of petroleum products and crude oils ..... Sep
– Monitoring low carbon monoxide emissions ..... Dec

Engineering
– New engineering contract ..... Jun
– Well engineering in the 1990s ..... Sep

Enron
– Enron chief sees positive gas price outlook ..... May

Enterprise Oil
– Optimism at Enterprise ..... Jun
– John Walmsley leaves Enterprise ..... Sep
– Enterprise/Repsol to explore Kazakhstan ..... Oct

Environment
– Contaminated ground water pump ..... Jan
– A substantial increase in gasolines with clean-up additives ..... Jan
– Fully biodegradable non-toxic oil and brine remover ..... Feb
– Industrial effluent treatment ..... Feb
– A milestone in marine pollution control ..... Feb
– Oil/water separation ..... Feb
– Call for responsive international environmental policies ..... Mar
– Protecting drains from tanker spillage ..... Mar
– The environmental classification of complex hydrocarbon mixtures ..... Apr
– European standard forecourt interceptor ..... Apr
– Shell counts environmental cost of petrol station refit ..... May
– French policy on bio-fuels ..... May
– Slow progress for power from renewables ..... May
– Surveying contaminated ground ..... May
– Environmental guidelines for petroleum distribution installations ..... Jun
– Fuel contamination monitor ..... Jun
– Safe solvent ..... Jun
– Tanker spill response kits ..... Jun
– Sea Truck Workboat to provide rapid response to Thames oil spills ..... Jun
– The role of logistics within the downstream sector ..... Jul
– Environmental guard for piping ..... Jul
– Hazardous chemicals regulations ..... Aug
– Fate and Effects of Marine Pollution in UK Waters – with a perspective on IP-sponsored research ..... Aug
– Powergen gets Orimulsion go-ahead ..... Sep
– Clean-up kits ..... Sep
– Putting the environment first ..... Nov
– Vacuum extraction ..... Nov
– Elf goes green with Ecotech coatings ..... Dec

Fina
– Elf and Fina in service station swap ..... Nov

Finland
– Finnish energy switch gathers speed ..... Dec

Fiscal
– UK 1993 budget commentary: some will win and some will lose ..... Apr
– No change yet to UK budget provisions ..... May
– North Sea tax tracking system ..... ITS Supplement May 93
– Europe needs a bold initiative: EPIS ..... Jun
– North Sea tax changes require strategy reviews ..... Jun
– Lukewarm response to tax changes ..... Jul
– Saga of Clinton's energy tax ..... Aug
– Government stands firm on Budget changes ..... Aug
– UK blocks PRT reform loophole ..... Sep
– Peru changes laws to attract investors ..... Sep
– Financial incentives for the petroleum industry ..... Oct
– UK inquiry underway into Kuwait's BP tax deal ..... Nov
– Saudi oil minister renews attack on carbon tax ..... Nov
– The approach of excise law reform ..... Nov

Former Soviet Union
– Collapse in Former Soviet Union ..... Aug
– Oil and Gas in the Former Soviet Union: The Changing Foreign Investment Agenda (book review) ..... Aug
– 'Western oil and gas activity in the FSU has already taken off' ..... Dec

Fuels
– The European automotive gasoil market ..... Sep
– Recommendations for change in the methodology for Flash Point Testing of Residual Fuels ..... Sep

Gulf
– Geotechnical survey in Gulf ..... Jun
– Extending life expectancy in the Gulf ..... Oct
– Gulf gas – tomorrow's nest-egg ..... Dec

Health & Safety
– Companies gain right of appeal for safety cases ..... Jan
– HSE exemption for gasoline deliveries ..... Feb
– Tanker accident could herald European movement restrictions ..... Feb
– Firefighting Halon replacement ..... Feb
– Fire fighter for oil tanks ..... Feb
– Underwriters to deny insurance for unsafe vessels ..... Mar
– New survival aid patented ..... Mar
– Safety advisory service launched ..... Apr
– Thinking the unthinkable ..... Apr
– Keeping pace with the law ..... Apr
– Foam fire fighting system ..... Apr
– Phoenix survival craft ..... Apr
– Personal toxic gas monitoring ..... Apr
– Airline breathing apparatus ..... Apr
– Ergonomic design to prevent accidents ..... May
– Shutdown maintenance ..... May
– Safe solvent ..... Jun
– Safe tanker access ..... Jun
– Offshore safety information on a disc ..... Jul
– Safety suits ..... Jul
– Thomas the tanker ..... Jul
– Passive fire protection ..... Jul
– Hazardous chemicals regulations ..... Aug

INDEX 1993

- Emergency response trailer ..... Aug
- Emergency lighting ..... Aug
- Intrinsically safe torch ..... Aug
- Shallow gas hazard – the HSE perspective ..... Sep
- Survival training – based on fact or fiction? ..... Sep
- Recommendations for change in the methodology for Flash Point Testing of Residual Fuels ..... Sep
- Marathon orders evacuation system ..... Sep
- Handling hazardous materials ..... Sep
- Tougher safety rules to prevent offshore fire and explosion ..... Oct
- Does information technology improve safety training? ..... Oct
- LNG fire-fighting foam ..... Oct
- Automatic emergency roll-call ..... Oct
- Unions call for international talks over safety at Karachaganak ..... Nov
- Oil companies to pool knowledge on tanker safety ..... Nov
- 'Why has HSE ignored Lord Cullen's views?' ..... Nov
- Beware – changes ahead in transport of dangerous goods ..... Nov
- Tank testing service ..... Nov
- Wellingtons go to war ..... Nov
- Lightweight fireproofing ..... Nov
- Forecourt contractors in safety drive ..... Dec
- Managing chemicals and flammable liquids ..... Dec

Honours
- New Years Honours ..... Feb
- Queen's Birthday Honours ..... Jul
- Knighthood for Shell chairman ..... Aug

Independent
- Independent takeover ..... Apr
- Independents claim free-market gas will 'cut household bills' ..... Nov

Indonesia
- Indonesia's plans for Natuna Sea gas ..... Jul

Information Service News
- ..... Jan
- ..... Apr
- ..... Aug
- ..... Nov

Institute of Petroleum
- Certificate of Appreciation Awards ..... Jan
- Irish Branch Annual Dinner ..... Jan
- Launch of IP code ..... Jan
- Aberdeen branch membership drive ..... Feb
- Yorkshire branch visits X1 (F) Squadron, RAF Leeming ..... Feb
- IP Annual Dinner ..... Mar
- IP Luncheon (IP Week) – Call for responsive international environmental policies ..... Mar
- New IP Staff Member ..... Mar
- Benevolent Fund ..... Apr
- Malta Branch Annual Dinner ..... Jun
- Then and now – 80 years at the IP ..... Jul
- IP Annual General Meeting ..... Jul
- IP Certificate of Appreciation ..... Jul
- Benevolent Fund ..... Jul
- Student Prize winner ..... Jul
- New IP guidelines ..... Aug
- New IP branch in the Netherlands ..... Aug
- Student Prize winner ..... Aug
- Award of Certificate of Appreciation ..... Sep
- IP Draft Code of Practice for On-board Truck Computers ..... Sep
- Student Prize winner ..... Sep
- Benevolent Fund ..... Oct
- IP Council appoints President Elect ..... Nov
- New IP Honorary Treasurer ..... Nov
- Awards of IP Certificates of Appreciation ..... Nov
- Scottish Branch Golf Tournament ..... Nov
- Student Prize winner ..... Nov
- Award of Certificate of Appreciation ..... Dec
- Student Prize winner ..... Dec

Iran
- Iranian gas to come to the aid of Armenia ..... Sep
- Trials and tribulations for Iranian gas ..... Oct

Iraq
- Iraqi return ever nearer ..... Aug
- Ex-Matrix man becomes Iraq's new oil minister ..... Oct

Italy
- ENI plans to sell as one entity ..... Nov

Japan
- Japan steps up investment in North Sea ..... Dec

Jordan
- Indigenous energy finally makes its mark in Jordan ..... Nov

Kazakhstan
- Enterprise/Repsol to explore Kazakhstan ..... Oct

Kuwait
- Which way forward for a revitalised Kuwait? ..... May
- Kuwaiti/OPEC split threatens oil prices ..... Jul
- Kuwait to close Italian refinery ..... Aug
- UK inquiry underway into Kuwait's BP tax deal ..... Nov
- Kuwaiti executive resigns ..... Nov

Libya
- Libya awaits its fate ..... Nov
- Security Council votes for tighter Libyan sanctions ..... Dec

Lubricants
- The European lubricants market and the role of the independent lubricant manufacturers ..... Jan
- Classification of engine lubricants ..... Feb
- Advanced lubricant training ..... Mar
- The outlook for lubricants supply and demand in key West European markets ..... Jun
- Changes in engine oils ..... Sep
- Testing for auto oils ..... Sep

Malaysia
- Malaysia's big pipeline ..... Oct

Malta
- Maltese concerns over offshore exploration zone ..... May

Marathon Oil UK Ltd
- Consortium awarded production licences in Cardigan Bay ..... May
- Marathon orders evacuation system ..... Sep

Marine Biology
- The importance of hydrocarbon input as an energy source for benthic production near natural gas and oil seeps ..... Mar
- Fate and Effects of Marine Pollution in UK Waters – with a perspective on IP-sponsored research ..... Aug

Measurement
- Infra red temperature measurement ..... Jan
- Non contact flow measurement ..... Mar
- Customs & Excise cede control of metering to companies ..... Apr
- Improved range of higher accuracy dead weight testers ..... May
- Coriolis mass metering on LPG road vehicles ..... Dec
- Tank monitoring offers auto calibration ..... Dec

Mediterranean
- Southern Mediterranean activity is fanning out ..... Feb

Mexico
- Mexican oil: poverty issue will force a change ..... Jan

Mobil
- New outlook on Europe from Mobil House ..... May
- Isomerisation comes to Coryton ..... Nov
- Gas drying control at Mobil's Beryl Alpha ..... Nov

Natural Gas
- Will British coal put an end to gas? ..... Mar
- Gas supply ..... Apr
- Gas discovery ..... Apr
- Omani-Indian gas deal ..... Apr
- Abu Dhabi gas expansion ..... May
- Coal's future in the balance as gas gets the go-ahead ..... Apr
- UK/Ireland gas interconnector ..... Jun
- LNG reliquefaction-storage-sendout system ..... Jun
- Indonesia's plans for Natuna Sea gas ..... Jul
- Gas – key to curbing Pakistani energy shortage ..... Jul
- Strong support for Gas Interconnector ..... Sep
- MMC recommends break-up of British Gas ..... Sep
- Iranian gas to come to the aid of Armenia ..... Sep
- Independents claim free-market gas will 'cut household bills' ..... Nov
- Interconnector moves a stage nearer ..... Nov
- Middle East gas production to soar ..... Nov
- Britannia first gas delay ..... Nov
- Integration for Theddlethorpe gas terminal ..... Dec
- Gulf gas – tomorrow's nest-egg ..... Dec

INDEX 1993

- Bright prospects for Canadian gas ..... Dec
- 'Western oil and gas activity in the FSU has already taken off' ..... Dec

New Zealand
- New Zealand's Maui B project comes on stream ..... Feb
- Maui number one in New Zealand ..... Jul

Nigeria
- 'Nigeria at a crossroads' ..... Oct
- New acting chief for NNPC ..... Nov

North Sea
- Severe weather slashes production ..... Feb
- Offshore licensing round gets big response ..... Feb
- North Sea evacuation ..... Mar
- Achieving a low cost culture in the North Sea ..... Apr
- Collision shutdown ..... May
- Oil production forecast to hit record levels in 1995 ..... May
- Black Sea rig move ..... May
- North Sea tax tracking system ..... ITS Supplement May 93
- North Sea expansion ..... Jun
- North Sea tax changes require strategy reviews ..... Jun
- Ocean Odyssey firms face charges ..... Aug
- Ocean Odyssey firms fined a record £275,000 ..... Sep
- Shallow gas hazard – the HSE perspective ..... Sep
- North Sea vision ..... Sep
- BP to boost North Sea spending ..... Oct
- Amoco's investment plans for southern North Sea ..... Nov
- Gryphon flows in record time ..... Nov
- Exploration top priority for Elf Enterprise ..... Dec
- Japan steps up investment in North Sea ..... Dec

Norway
- Norwegian code checks for StruCAD*3D ..... ITS Supplement May 93
- Spain connects with Norway ..... Jul

Obituaries
- Dr B N Ballantine ..... Feb
- R Gilpin ..... Feb
- B Madden ..... May
- R Adam ..... Jul
- Rimmer M J ..... Sep

OFGAS
- OFGAS concern over competition ..... Mar

Offshore
- Managing offshore installations ..... Feb
- Layflat pipes for offshore ..... Feb
- Sheathed rope's 300-year life ..... Mar
- Maltese concerns over offshore exploration zone ..... May
- Crude dewatering ..... May
- Offshore design appraisal service ..... Jun
- Offshore safety information on a disc ..... Jul
- Licences offered for 110 blocks ..... Jul
- Maui number one in New Zealand ..... Jul
- Mooring-tensioner units ..... Aug
- Scottish MP demands offshore pipeline watchdog ..... Oct

Onshore
- Onshore exploration licences awarded out-of-rounds ..... Oct
- Angling for oil at Wytch Farm ..... Oct

OPEC
- OPEC agrees production ceiling for first quarter ..... Jan
- OPEC appoints new executive ..... Jan
- OPEC agrees lower quotas ..... Mar
- Kuwaiti/OPEC split threatens oil prices ..... Jul
- OPEC warns of further price fall ..... Sep

Oryx
- Oryx UK seeks North Sea operatorship despite slashing exploration budget ..... Mar

Pakistan
- Gas – key to curbing Pakistani energy shortage ..... Jul

Papua New Guinea
- Progress in Papua New Guinea ..... Jul

Peru
- Peru changes laws to attract investors ..... Sep

Phillips Petroleum Company UK Ltd
- North Sea tax changes require strategy reviews ..... Jun
- Automatic emergency roll-call (Phillips, Norway) ..... Oct

Pipelines
- Pipeline pressure testing ..... Jan
- Pipeline ice plug prevents Lincolnshire flood ..... Mar
- Leak tracing system for oil and gas pipelines ..... ITS Supplement May 93
- UK/Ireland gas interconnector ..... Jun
- Flexible underground pipework ..... Jun
- Spain connects with Norway ..... Jul
- CATS on stream ..... Jul
- European gas link plans unveiled ..... Jul
- Environmental guard for piping ..... Jul
- Pipeline issues in Central Asia ..... Aug
- Strong support for Gas Interconnector ..... Sep
- New pipeline coating process ..... Sep
- Multiphase pipeline analysis ..... Sep
- Service station pipeline system ..... Sep
- Scottish MP demands offshore pipeline watchdog ..... Oct
- Stena to set new pipelay record ..... Oct
- Interconnector moves a stage nearer ..... Nov
- Walking through the inside of a pipe ..... Dec

Platforms
- Piper B starts production ..... Mar
- Cyclone season delays Goodwyn platform ..... Mar
- Brent redevelopment to extend field life into 21st century ..... May
- AP Moller takes delivery of advanced jack-up ..... Jun
- Ocean Odyssey firms face charges ..... Aug
- Mooring-tensioner units ..... Aug
- 3 tier, 10,000 tonne platform sails for Shell Nelson field ..... Sep
- Marathon orders evacuation system ..... Sep
- £100 million upgrade for Dunlin Alpha ..... Oct
- Extending life expectancy in the Gulf ..... Oct
- Underdeck scaffolding ..... Oct
- Aluminium accommodation ..... Oct
- Gryphon flows in record time ..... Nov
- Gas drying control at Mobil's Beryl Alpha ..... Nov

Projects
- Go-ahead for Connah's Quay terminal ..... Mar

Proteus Petroleum Ltd
- Proteus signs up Transfleet tankers ..... Jul

Pumps
- Endurance tests on downhole pump ..... Mar

Retailing
- 1993 oil supply and price scenario ..... Jan
- Concrete block pavements for service stations ..... Feb
- Retail network for Ireland ..... Mar
- Outdoor payment systems move on ..... Mar
- Advanced tank gauging system for forecourts ..... Mar
- Recession's impact on car market continues ..... RMS Supplement Mar 93
- Profitability threatened on all sides ..... RMS Supplement Mar 93
- Dealing with the dealer ..... RMS Supplement Mar 93
- Better to be safe than sorry ..... RMS Supplement Mar 93
- Motorway site for July opening ..... May
- Non-fuel retail sales worth £1.5 billion ..... May
- The 'European' service station: myth or reality? ..... Jun
- Proteus signs up Transfleet tankers ..... Jul
- Thomas the tanker ..... Jul
- Secure vehicle management ..... Jul
- Service station pipeline system ..... Sep
- Shared distribution service ..... Oct
- Elf and Fina in service station swap ..... Nov
- Save gains record number of sites ..... Nov
- The Euro-card war is coming ..... Nov
- Battle of the forecourts continues ..... Dec
- Forecourt contractors in safety drive ..... Dec
- Outdoor pay terminals approved ..... Dec

Reports
- Report aims to increase UKCS competitiveness ..... Apr

Russia
- Investing in Russian oil and gas: the legal factor ..... Mar
- Russian oil update ..... Aug
- The Russian Oil Industry: Status and Outlook (book review) ..... Aug
- The Russian Gas Industry: Status and Outlook (book review) ..... Aug
- 'I am encouraged by our experience in Russia' ..... Oct

Saudi Arabia
- Saudi merger creates new powerhouse ..... Jul

INDEX 1993

- Saudi/Total talks resume ..... Aug
- Saudi buys into Rotterdam refinery ..... Sep
- Saudi oil minister renews attack on carbon tax ..... Nov
- Valuable Saudi upstream data published ..... Dec

Shell
- Shell Japan's currency loss ..... Mar
- Shell counts environmental cost of petrol station refit ..... May
- Shell reshapes its LPG business ..... Jun
- New controls for Shell Haven refinery ..... Jun
- Restoring the balance ..... Jun
- Shell is going well in China ..... Jul
- Knighthood for Shell chairman ..... Aug
- Chevron and Shell to slash exploration ..... Aug
- 3 tier, 10,000 tonne platform sails for Shell Nelson field ..... Sep
- Union protest over derecognition at Shell Haven ..... Sep
- Well engineering in the 1990s ..... Sep
- Advances in the measurement of the vapour pressure of petroleum products and crude oils ..... Sep
- Shell 'classic' containers ..... Sep
- Dr Fay new Chairman of Shell UK ..... Oct
- £100 million upgrade for Dunlin Alpha ..... Oct

Shipping
- Tanker spill off Spanish coast ..... Jan
- Tankers collide in busy waterway ..... Feb
- Tanker operations to be tightened ..... Mar
- Ship insurers tighten standards ..... Apr
- VLCC replacement: the question is 'when' not 'whether' ..... Apr
- The Braer incident at first hand ..... Jun
- Tanker collision inquiries underway ..... Jul
- Navigation and positioning integration ..... Jul
- Role of coastal shipping in the primary distribution of petroleum product in the United Kingdom ..... Sep
- Oil companies to pool knowledge on tanker safety ..... Nov

Siberia
- Restoration for Siberian wells ..... Apr
- Amoco wins Western Siberia bid ..... Oct

Spain
- Olé for Spanish gas ..... Jun
- Spain connects with Norway ..... Jul

Storage
- Storage terminal expansion for Rothesay Dock ..... Mar
- Ekofisk tank problems raise insurance fears ..... Apr
- LNG reliquefaction-storage-sendout system ..... Jun
- Independent Bulk Storage Survey 1993 ..... Aug
- New tank storage association ..... Aug
- Economic benefits of contracting out storage ..... Aug

Subsea
- Valve for remote subsea operation ..... Jan
- Unmanned underwater vehicle research ..... Jun
- Seabed dredge ..... Aug
- Advanced diving ..... Sep
- SCS and Nowsco team up (Integrated Subsea Isolation Systems) ..... Nov
- Lightweight diving chamber meets standard ..... Dec

Sudan
- Latest oil developments in Sudan ..... Jun

Syria
- Expansion of Syrian crude production ..... Jun
- Protecting Syrian tanks ..... Nov

Technical Reports
- ..... Mar
- ..... Jun
- ..... Sep
- ..... Dec
- Technical publications 1993 ..... Dec

Technology
- Rebuilding exploration maps ..... Jan
- Synthetic oils ..... Jan
- NIR on-line analysis ..... Jan
- Surveillance data logger ..... Jan
- Analytical balance ..... Jan
- Microwave oil detector ..... Jan
- Light and weathering system ..... Jan
- High pressure knife gate valve ..... Feb
- Trace heating on ethylene project ..... Feb
- Hand held rechargeable searchlight ..... Feb
- Anti-corrosion technology advance ..... Feb
- Infrared detection ..... Feb
- Solidified sulphur solution ..... Mar
- Multi-purpose chemical hose ..... Mar
- Sulphur dioxide analyser ..... Apr
- Sulphur in oil ..... Apr
- New in-line fuel sampler ..... Apr
- Biosensor monitoring ..... Apr
- High conversion rates for ether-based oxygenate process ..... May
- Chimney demolished by water power ..... May
- High pressure relief valve ..... May
- Fluid loss reducing agent ..... May
- Pressure sensing valve ..... May
- Wax build-up ..... May
- Core analysis technique ..... Jun
- Monitoring made easy ..... Jun
- Economical 3D measuring ..... Jun
- Gas analysis ..... Jul
- ROV mateable connector ..... Jul
- Resistant coating ..... Jul
- Drag chain system ..... Aug
- Scale build-up technology ..... Aug
- Pipe flange ..... Sep
- Portable multi-gas detector ..... Sep
- Heat exchange refit with stainless steel ..... Sep
- New nut-splitting tools ..... Oct
- Heat tracing for BP Kinneil ..... Oct
- Compact variable speed controller ..... Oct
- Isomerisation comes to Coryton ..... Nov
- Slam it shut (Monoblock Slam shut unit) ..... Nov
- Speeding up 3D seismic ..... Nov
- Development in microbial control in metalworking fluids ..... Dec
- Specialist cables from ABB ..... Dec

Texaco
- Major terminal up-grade ..... Apr

Thailand
- Thailand: Economic expansion highlights potential energy problems ..... Jan

Tunisia
- Surge in exploration activity in Tunisia ..... Sep

Turkmenistan
- Latest news from Turkmenistan ..... Dec

USA
- President Clinton's Energy Tax ..... Mar
- US contingency plans for oil spills ..... Apr
- Expansion in US regulation of gasoline emissions ..... May
- Saga of Clinton's Energy Tax ..... Aug

Vapour Recovery
- Recovery of hydrocarbon vapours from ship loading of crude oil ..... Mar

Vietnam
- The practicalities of insurance in Vietnam ..... Jul

Venezuela
- Venezuelan deal ..... Apr
- Venezuela to increase production capacity ..... May

West Africa
- West African prospects still look good ..... Nov

Yemen
- Yemen – the next big player? ..... Mar

Yugoslavia
- Yugoslavia break-up reverses

40 years of energy development ..... May